

Title (en)

Synchronization of frames transmitted over multiple parallel transmission paths in a cellular communications network according to a common connection-specific timing reference

Title (de)

Synchronisierung von Rahmen, die über eine Mehrzahl von parallelen Übertragungswegen in einem zellularen Kommunikationsnetz übertragen werden, gemäß einer gemeinsamen, verbindungs-spezifischen zeitlichen Referenz

Title (fr)

Synchronisation de trames transmises sur des voies de transmission multiples et parallèles dans un réseau cellulaire de communications selon un référence temporelle commune spécifique à la connexion

Publication

**EP 1610474 A2 20051228 (EN)**

Application

**EP 05108181 A 19991105**

Priority

- EP 99956044 A 19991105
- FI 982399 A 19981105
- FI 990499 A 19990308
- FI 991184 A 19990525

Abstract (en)

A mechanism for encrypting transmission of frames in a telecommunications network comprising a mobile station (MS), a radio network controller (SRNC) and at least one base station (BS1, BS2). The mobile station (MS) and each base station (BS1,BS2) have a corresponding timing reference (MSFN,BS1FN,BS2FN). The mechanism comprises the step of establishing a connection-specific timing reference which is common to all nodes (MS,BS1,BS2,RNC) involved in the connection and which comprises a common frame numbering scheme agreed between the mobile station (MS) and the radio network controller (SRNC) while establishing the connection, wherein said reference comprises a connection-specific frame number (CFN) and a frame number extension (HFN); the mobile station (MS) and the radio network controller (SRNC) use the CFN and the HFN for ciphering and deciphering the frames.

IPC 1-7

**H04B 7/26**; **H04L 9/00**

IPC 8 full level

**H04L 7/00** (2006.01); **H04W 56/00** (2009.01); **H04B 7/26** (2006.01); **H04L 9/00** (2006.01); **H04W 92/10** (2009.01)

CPC (source: EP US)

**H04B 7/2681** (2013.01 - EP US); **H04B 7/2684** (2013.01 - EP US); **H04W 56/0015** (2013.01 - EP US); **H04W 56/0045** (2013.01 - EP US); **H04W 92/10** (2013.01 - EP US)

Citation (applicant)

- WO 9857450 A1 19981217 - ERICSSON TELEFON AB L M [SE]
- WO 9508899 A1 19950330 - NOKIA TELECOMMUNICATIONS OY [FI], et al
- WO 9747111 A1 19971211 - NOKIA MOBILE PHONES LTD [FI], et al
- FI 990500 A 20000909 - NOKIA MOBILE PHONES LTD [FI]
- FI 980209 A 19990730 - NOKIA MOBILE PHONES LTD [FI]

Designated contracting state (EPC)

AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE

Designated extension state (EPC)

BA HR YU

DOCDB simple family (publication)

**WO 0028744 A2 20000518**; **WO 0028744 A3 20000727**; AT E316317 T1 20060215; AT E538617 T1 20120115; AU 1273900 A 20000529; BR 9915081 A 20010717; BR 9915081 B1 20131231; CN 1278571 C 20061004; CN 1421108 A 20030528; DE 69929535 D1 20060406; DE 69929535 T2 20061116; EP 1125449 A2 20010822; EP 1125449 B1 20060118; EP 1610474 A2 20051228; EP 1610474 A3 20100616; EP 1610474 A8 20060426; EP 1610474 B1 20111221; FI 106494 B 20010215; FI 991184 A0 19990525; FI 991184 A 20000506; JP 2002530021 A 20020910; JP 3519688 B2 20040419; US 2001046240 A1 20011129; US 7085294 B2 20060801

DOCDB simple family (application)

**FI 9900926 W 19991105**; AT 05108181 T 19991105; AT 99956044 T 19991105; AU 1273900 A 19991105; BR 9915081 A 19991105; CN 99813850 A 19991105; DE 69929535 T 19991105; EP 05108181 A 19991105; EP 99956044 A 19991105; FI 991184 A 19990525; JP 2000581817 A 19991105; US 84758001 A 20010503